ISAKOV, I.S.---(continued) Card 2.
podpolkovnik, pomoshchnik glavnogo red. po izd-vu: SEDOV, N.Ye.,
kapitan 2 ranga, uchenyy sekretar'; VOROB'YEV, V.I., kapitan
1 ranga, red.kart; MIGALKIN, G.A., inzh.-kapitan 1 ranga, red.kart;
GAPONOVA, A.A., red.kart; GONCHAROVA, A.I., red.kart; GORBACHEVA,
N.Ye., red.kart; GRYUNBERG, G.Yu., red.kart; DUROV, A.G., red.
kart; YERSHOV, I.B., red.kart; ZIL'BERSHER, A.B., red.kart;
KASTAL'SKAYA, N.I., red.kart; KUBLIKOVA, M.M., red.kart; MAKAROVA,
V.N., red.kart; MOROZOVA, A.F., red.kart; PAVLOVA, Ye.A., red.
kart; POCHUBUT, A.N., red.kart; ROMANOVA, G.N., red.kart; SMIRNOVA,
L.V., red.kart; SMIRNOVA, L.N., red.kart; TANANKOVA, A.I., red.
kart; YANEVICH, M.A., red.kart; YASINSKAYA, L.F., red.kart;
VASIL'YEVA, Z.P., tekhn.red.; VIZIROVA, G.N., tekhn.red.; GOLOVANOVA,
A.T., tekhn.red.; GOROKHOV, V.I., tekhn.red.; MALINKO, V.I., tekhn.
red.; SVIDERSKAYA, G.V., tekhn.red.; CHERNOGOROVA, L.P., tekhn.red.;
FURAYEVA, Ye.M., tekhn.red.

[Marine atlas] Morskoi atlas. Otv.red. I.S. Isakov. Glav.red.
L.A. Demin. Izd. Morskogo general'nogo shtaba. Vol.1 [Navigation
geography] Navigatsionno-geograficheskii. Zamestitel' otv. red.
po I tomu V.A. Petrovskii. 1950. 83 maps.   (MIRA 12:1)
                                        (Continued on next card)

ISAKOV, I.S.---(continued) Card 3.
1. Russia (1923- U.S.S.R.) Voyenno-morskoye ministerstvo.
2. Nachal'nik Morskogo kartograficheskogo instituta voyenno-
morskikh sil (for Lamykin). 3. Deystvitel'nyy chlen Akademii
pedagogicheskikh nauk RSFSR (for Orlov). 4. Nachal'nik Gidro-
graficheskogo upravleniya voyenno-morskikh sil (for Tributs).
5. General'nyy gosudarstv. direktor topograficheskoy sluzhby (for
Baranov). 6. Direktor topograficheskoy sluzhby (for Milenki).
      (Ocean--Maps)   (Harbors--Maps)

VOLKOV, F. G.

The Committee on Stalin Prizes (of the Council of Ministers USSR) in the fields of science and inventions announces that the following scientific works, popular scientific books, and textbooks have been submitted for competition for Stalin Prizes for the years 1952 and 1953. (Sovetskaya Kultura, Moscow, No. 22-40, 20 Feb - 3 Apr 1954)

Name	Title of Work	Nominated by
Isakov, I. S.	"Marine Atlas" (Vol 11)	Geographical Society
Shuleykin, V. V.		of the USSR, Academy
Demin, L. A.		of Sciences USSR
Vorob'yev, V. I.		
Seregin, M. P.		
Yegor'yeva, A. V.		
Smirnova, V. G.		
Kudryatsev, M. K.		
Babakhanov, A. C.		
Rudovits, L. F.		
Volkov, F. G.		
Salishchev, K. A.		
Orlov, B. P.		
Kalesnik, S. V.		
Shvede, Ye. Ye.		
Snezhinskiy, V. A.		
Pogosyan, Kh. P.		
Drozdov, O. A.		

SO: W-30604, 7 July 1954

VOLKOV, F.I.

KHETAGUROV, G.D.; DOBROSERDOV, Ye.I.; YERGALIYEV, A.Ye.; VOLKOV F.I.

Practice of applying high productive systems of mining in certain mines. Vest. AN Kazakh. SSR 11 no.9:80-91 S '54.

(Mining engineering)   (MLRA 8:2)

USSR / Forestry. Forest Crops.   K-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72822.

Author : Volkov, F. I.
Inst   : Institute of Forestry, AS USSR
Title   : Some Data on the Influence of Thinning of Timber
          Stands and of Soil Friability on Fruit Bearing of
          Oak.

Orig Pub: Soobshch. In-ta lesa. AN SSSR, 1957, vyp. 8, 3-12.

Abstract: By investigations of the foothill leafy forests of
          I-II quality of the Tellermanov Leskhoz (Balashov-
          skaya Oblast), the dependence was established of
          the degree of acorn harvest on the farming improve-
          ments in the mixed forest plots. Thinning of mixed
          leafy forests to a thickness of 0.6 by means of
          cutting out accompanying species, asp and birch
          first, aids preservation of moisture and soil

Card 1/2

USSR / Forestry. Forest Crops.   K-5

Abs Jour: Ref Zhur-Biol., No 16, 1958, 72822.

Abstract: nutrients, improving conditions for cross-ferti-
lization. This measure, along with simultaneous
cultivation of the soil by 2-meter strips for
half the area, contributed to a 2.5-fold harvest
increase on the experimental plots. Cutting out
part of the underbruch, cleaning down timber out
of the plots and uprooting stumps also provided
a 2.0-2.5-fold greater acorn harvest than in the
usual conditions. Spraying the branches in the
flowering period with a 0.005 concentration of
boric acid in experiments at the Main Botanic
Garden AS USSR gave a 1.5-fold increase in the
quantity of acorns on 31 August over that of the
controls. -- D. I. Deryabin.

VOLKOV, F.I.

Effect of foliar feeding with boron on acorn yields.
Biul. Glav. bot. sada no.31:109-111 '58.   (MIRA 12:5)

1.Institut lesa AN SSSR.
                         (Plants, Effect of boron on)
                         (Acorns)

VOLKOV, F. I.

32606.   VOLKOV, F. I.   Onaibolee zffektivnom ispol'zovanii lesnykh semyan.   les i
step', 1949, No 3, s. 12-17

SO: Letopis' Zhurnal' nykh Statey, Vol. 44

VOLKOV, F.I.

How the thinning of stands and scarifying of soil affects the fruiting of oaks. Soob. Inst. lesa no.8:3-12 '57. (MIRA 11:5)
(Oak) (Forest thinning)

VOLKOV, F.I.

Basis for some methods for sowing acorns. Trudy Inst. lesa 38:
51-58 '58.   (MIRA 11:10)
                        (Acorns)

VOLKOV, F. I.

Acorns

Specific weight of acorns as an index of ripeness and quality. Dokl. AN SSSR 85 No. 1, 1952.

Monthly List of Russian Accessions, Library of Congress, November 1952. UNCLASSIFIED.

VOLKOV, F. I.

Seed Industry and Trade

Cultivation of forests and organization of seed growing farms. Les. Khoz., 4, no. 12, 1951

Monthly List of Russian Accessions. Library of Congress. April 1952. UNCLASSIFIED.

VOLKOV, F. I.

Forests and Forestry

Cultivation of forests and organization of seed growing farms. Les. khoz. 4 no. 12, 1951

Monthly List of Russian Accessions. Library of Congress, April 1952. UNCLASSIFIED.

VOLKOV, F. I.

USSR/Mining Methods
    Explosives
                                                        Feb 49

"The Development of Exploitation Systems Using Torpedo Holes for Ore Breaking in the Krivoy Rog Basin," G. M. Malakhov, A. D. Polishchuk, F. I. Volkov, 6 pp

"Gor Zhur" No 2

Deep torpedo holes for ore breaking may be used on ores with strength less than 8, where width of the vein is not less than 10 meters. The system is being used successfully in Krivoy Rog Basin.

PA 40/49T82

VOZNESENSKIY, Lev Aleksandrovich; VOLKOV, Feliks Mikhaylovich;
    SHVEYTSER, Ye.K., red.; PAVLOVA, A., tekhn. red.

    [How to fulfill the work on tests and term papers in
    economics; aid for the correspondence school students of
    institutions of higher learning] Kak vypolnit' kontrol'-
    nuiu i kursovuiu raboty po politicheskoi ekonomii; posobie
    studentam-zaochnikam VUZOV. Moskva, Gosizd-vo "Vysshaia
    shkola," 1960. 28 p.   (MIRA 16:7)
                (Economics--Study and teaching)

TSAGOLOV, N.A., prof., red.; KHESSIN, N.V., dotsent, red.; Prinimali
uchastiye: SOLODKOV, M.V., dotsent; CHERKOVETS, V.N., kand.ekon.
nauk; VOLKOV, F.M., kand.ekon.nauk; VOZNESENSKIY, L.A., nauchnyy
sotrudnik. GORDEYEVA, L.N., red.; YERMAKOV, M.S., tekhn.red.

[Problems of political economy] Voprosy politicheskoi ekonomii.
Pod red. N.A.TSagolova i N.V.Khessina. Moskva, 1960. 278 p.
                                                (MIRA 13:4)

1. Moscow. Universitet.
                    (Economics)

VOLKOV, Feliks Mikhaylovich, prepodavatel'; BUDARINA, V., red.; GRIGOR'YEVA,I.,
mladshiy red.; CHEPELEVA, O., tekhn. red.

[Expanded replacement of skolled labor in the U.S.S.R.] Rasshirennoe
vosproizvodstvo kvalifitsirovannoi rabochei sily v SSSR. Izd-vo
sotsial'no-ekon. lit-ry, 1960.   205 p.   (MIRA 14:6)

1. Moskovskiy gosudarstvennyy universitet (for Volkov)
                        (Labor supply)

YAGODKIN, Vladimir Nikolayevich; VOLKOV, F.M., red.; OZIRA, V.Yu.,
    red.; YERMAKOV, M.S., tekhn.red.

[Socialist reproduction] Sotsialisticheskoe vosproizvodstvo.
Moskva, Izd-vo Mosk.univ., 1960. 74 p.

(MIRA 14:2)

(Economics)

VOLKOV, Feliks Mikhaylovich; VOZNESENSKIY, Lev Aleksandrovich; TSYPKINA,
F.L., red.; YELAGIN, A.S., tekhn. red.

[Communism is born in work; the role of collectives and shock
workers of communist labor in the building of communism] Kom-
munizm rozhdaetsia v trude; o roli dvizheniia kollektivov i udarnikov
kommunisticheskogo truda v stroitel'stve kommunizma. Moskva, Izd-vo
"Sovetskaia Rossiia," 1961. 74 p.   (MIRA 14:12)
(Labor and laboring classes)

VOLKOV, F. N.

Mowing Machines

Better use of self-propelled hay mowers. Korm. baza 3 no. 7, 1952.

Monthly List of Russian Accessions, Library of Congress, September 1952. UNCLASSIFIED.

VOLKOV, F.N. (Moscow)

Hypnosis as a method of psychotherapy in polyclinical practice.
Klin.med. 32 no.9:35-41 S '54.   (MLRA 7:12)

1. Iz Polikliniki No. 42 Krasnopresnenskogo rayona Moskvy.
   (HYPNOSIS, therapeutic use)

VOLKOV, F. N.

Hay stacker
Moskva, Ministerstvo sel'skogo khoziaistva SSSR, 1955

1. Agricultural machinery.

VOLKOV, F.S.; LIPSHITS, N.V.

Complete modernization of equipment. Tekst.prom. 19 no.10:
65-68 O '59.   (MIRA 13:1)

1. Nachal'nik Upravleniya legkoy promyshlennosti Bryanskogo
sovnarkhoza (for Volkov). 2. Glavnyy inzhener Upravleniya legkoy
promyshlennosti Bryanskogo sovnarkhoza (for Lipshits).
          (Bryansk Province--Textile industry)

VOLKOV, F.V., student

In field practice. Zashch. rast. ot vred. i bol. 9 no.7:11-12 '64.
(MIRA 18:1)

1. Gor'kovskiy sel'skokhozyaystvennyy institut.

VOLKOV, G. (Lt. Gen. Air Engineer Service)

"Organization Problems of the Air Engineer Service", Vestnik Vozdushnovo Flota, No. 10, October 1946.

SO: Translation W-418, 22 Apr. 1948.

VOLKOV, G.

Economic efficiency of surface coal mining. Vop.ekon. no.2:23-33
F '57.   (MLRA 10:5)
                    (Coal mines and mining)

VOLKOV, G., kotel'shchik-montazhnik; MIZIN, V., master vzryvnik; ZAKIROV, G., elektroslesar'; SHAPIRO, G.

More but not merrier. Okhr. truda i sots. strakh. 5 no.8:36 Ag '62.
(MIRA 15:7)

1. Predsedatel' tsekhovogo komiteta Kuznetskogo metallurgicheskogo zavoda (for Volkov). 2. Strakhnovoy delegat shakhty imeni Kalinina Kemerovskaya obl. (for Mizin). 3. Shakhta "Koksovaya-1", Kemerovskaya obl. (for Zakirov). 4. Spetsial'nyy korrespondent zhurnala "Okhrana truda i sotsial'noye strakhovaniye" (for Shapiro).
(Kemerovo Province—Health resorts, watering places, etc.)

VOLKOV, G.

Machines and the harvest. Sov.profsoiuzy 18 no.10:5-7 My '62.
(MIRA 15:5)
1. Zamestitel' predsedatelya Vsesoyuznogo ob"yedineniya Soveta
Ministrov SSSR po prodazhe sel'skokhozyaystvennoy tekhniki,
zapasnykh chastey, mineral'nykh udobreniy i drugikh material'no-
tekhnicheskikh sredstv, organizatsii remonta i ispol'zovaniya
mashin v kolkhozakh i sovkhozakh.
(Farm mechanization)   (Tractors)

GORBUNOV, N.; VOLKOV, G.; CHAYKA, Z.

Increasing labor productivity in open-cut coal mines. Biul.nauch.
inform.:trud i zar.plata 3 no.9:3-7 '60.   (MIRA 13:9)
        (Strip mining--Labor productivity)

VOLKOV, G

Silovye ustanovki samoletov. Leningrad, Leningradskaia krasnoznamennaia voen-
no-vozdushnaia inzhenernaia akademiia, 1947. 352 p.

Title tr.: Aircraft power plants.

NCF

SO: Aeronautical Sciences and Aviation in the Soviet Union, Library of Congress, 1955

1. VOLKOV, G.

2. USSR (600)

4. Amateur Theatricals

7. Opera in a textile workers' club, Sov.soiuz no. 5, 1953.

9. <u>Monthly</u> <u>List</u> <u>of</u> <u>Russian</u> <u>Accessions</u>, Library of Congress,   APRIL   1953. Unclassified.

VOLKOV, G.

Planning the number of auxiliary workers. Sots.trud 4 no.7:
87-92 Jl '60.   (MIRA 13:8)
(Kharkov--Tractor industry)

VOLKOV, G.

New machines go to fields. NTu 4 no.5:6-9 My '62. (MIRA 15:5)

1. Zamestitel' predsedatelya Vsesoyuznogo ob"yedineniya Soveta Ministrov SSSR "Soyuzsel'khoztekhnika".
(Agricultural machinery)

VOLKOV, G., kand.tekhn.nauk

Flight on a rocket-propelled aircraft. Kryl.rod. 13 no.2:30-31
F '62.   (MIRA 15:1)
                    (Rockets in transportation)

VOLKOV, G.A.

Energy spectra of electrons at various points of an irradiated
medium. Fiz. tver. tela 3 no.2:354-359 F '61.   (MIRA 14:6)

1. Agrofizicheskiy institut, Leningrad.
                    (Electrons—Spectra)

study of the resting potential of individual cells of the alga
Nitella flexilis. Report could changes in the resting potential
during photosynthesis of such by light and darkening. Bibliography
... (MIRA 18:3)

.. Laboratory yu radiatsionnoy biofiziki meduzy Agrotichasknogo
instituta, Leningrad.

VOLKOV, G.A.; RIK, G.R.

On the problem of α-dosimetry in marginal region of heterologous
media. Biofizika 5 no.1:60-68 '60.   (MIRA 13:6)
        (RADIOMETRY)

YEVTUYEVA, Ye.; VOLKOV, G.

All-woven driving belts made of synthetic fibers. Mashinostroitel'
no.1:27 Ja '62.   (MIRA 15:1)
                    (Belts and belting)
                    (Textile fibers, Synthetic)

S/183/60/000/02/07/025
B004/B005

AUTHOR: Volkov, G. A., Chief Engineer

TITLE: Report

PERIODICAL: Khimicheskiye volokna, 1960, No. 2, pp. 17 - 18

TEXT: This report was delivered at the Branch Conference of the Synthetic Fiber Industry in Klin, December 16-18, 1959. The lecturer mentions the production faults of his factory. The weaving mill fabrika "Krasnaya Roza" ("Red Rose" Factory) found 0.11 - 0.36 breakages per 1 kg of rayon. The measures taken to improve the quality are enumerated. The technical regulations are still not being observed. The Krasnoyarskiy sovnarkhoz (Krasnoyarsk sovnarkhoz) is requested to help with the supply of stainless steel tubes. Production of cord fiber was started with difficulties in May 1959. Workers were missing, the rubberized parts of the zavod "X let Oktyabrya" ("10 Years of October" Works) were useless, the assembly was carried out badly. Errors were made by the GIPROIV (State Institute for the Design and Planning of Synthetic Fiber Industry Establishments) in planning the factory. The Upravleniye khimicheskogo volokna Goskomiteta Soveta Ministrov SSSR po khimii (Administration for Chemical Fibers of the State

Card 1/2

Cop' ..

S/183/60/000/02/0 ...
B004/B005

Committee on Chemistry of the Council of Ministers USSR) is to secure the supply
of oiling agents. The cellulose of the Priozerskiy kombinat (Priozersk Kombinat)
is of inferior quality. Caustic soda contains 130 mg/l of iron oxides. The supply
of spare parts is deficient. The zavod im. K. Marksa (Works imeni K. Marx) pro-
duces no spare parts for the spinning frames of the type PN-300-IZ. The
Rosglavmashsbyt entrusted the production of these spare parts to the "10 Years
of October" Works but no molds are available there for this purpose. The VNIIV
(All-Union Scientific Research Institute of Synthetic Fibers) should better care
for its branches which are doing nothing at all. Research work done by the VNI.
does not fulfill the demands of industry. Rationalization is being carried on in
the lecturer's factory, but other factories in Krasnoyarsk, such as zavod
sinteticheskogo kauchuka (Synthetic Rubber Works), gidroliznyy zavod (Hydrolysis
Works) show better results. Automation in the synthetic fiber industry is back-
ward. Not much knowledge can be acquired in the Klinskiy kombinat (Klin Kombinat)
either. A model plant serving as a pattern for other factories should be erected.

ASSOCIATION: Krasnoyarskiy zavod (Krasnoyarsk Works)

Card 2/2

ACCESSION NR: AR5006790   S/0299/65/000/001/R026/R026

SOURCE: Ref. zh. Biologiya. Svodnyy tom, Abs. 1R182

AUTHOR: Volkov, G. A.

TITLE: Investigation of rest potential in a single cell of Nitella flexilis algae. 1. Change in rest potential of cell stimulated by light and darkness

CITED SOURCE: Tsitologiya,

TOPIC TAGS: Nitella flexilis, cell, rest potential, light brightness

TRANSLATION: In switching

L 39310-65
ACCESSION NR: AR5006790

can be divided into 3 phases. The first phase - increase of rest
potential depending on "previous history" of the process and
illumination value for the cell. The second phase - decrease of
rest potential. Wi...

rest potential changes, but the decrease value remains constant.
Accomodation is observed w...

S...

Card 2/2

L 59325-65   EWG(a)-2/EWG(c)/EWG(j)/EWG(r)/EWG(v)/EWT(1)/FS(v)-3   Pb--   DD
ACCESSION NR: AP5019330

UR/0020/64/155/005/1224/1226

AUTHOR: Volkov, G. A.

TITLE: Change in the rest potential of an individual cell of the alga nitella flexilis during stimulation by light

SOURCE: AN SSSR. Doklady, v. 155, no. 5, 1964, 1224-1226

TOPIC TAGS: algae, plant sensibility, light biologic effect

ABSTRACT: The effect of light stimulus from an incandescent lamp on the rest potential was investigated on individual cells of the alga Nitella flexilis, cultured in medium above layers of river silt and quartz sand, under 12-hour fluorescent lighting. A definite transition process was observed upon passage from darkness to light and vice versa. The darkness-to-light reaction consisted of three characteristic phases: a small increase in the potential, directly after the light was turned on, lasting 5-20 minutes; a pronounced front of decrease in the rest potential, the basic reaction to the stimulus; and a quenching vibrational process or an asymptotic approach to a new stationary state. When the light is again turned off, the reaction

Card 1/2

L 59355-65

ACCESSION NR: AP5019330

is gradually extinguished against a background of the developing lighto-to-darkness reaction. The light-to-darkness reaction is simpler and usually more stable: immediately after the light is turned off, the rate of change of the rest potential is a maximum and directed toward negative values; it decreases rapidly, passing through zero, and changes direction. In the case of short light flashes after prolonged darkness, and vice versa, the resultant variation of the rest potential represents a competition of the initial stages of the darkness-to-light and light-to-darkness reactions, and hence possesses an anomalous appearance.   Orig. art. has: 3 graphs.

ASSOCIATION: Agrofizicheskiy nauchno-issledovatel'skiy institut (Agrophysical Scientific Research Institute)

SUBMITTED: 07Jun63   ENCL: 00   SUB CODE: LS, OP

NR REF SOV: 003   OTHER: 007   JPRS

Card 2/2

VOLK, v., G.A.

21(t)

PHASE I BOOK EXPLOITATION   SOV/2714

International Conference on the Peaceful Uses of Atomic Energy. 2nd, Geneva, 1958

Doklady sovetskikh uchenykh; yadernoye goryuchaye i reaktornyye metally. (Reports of Soviet Scientists; Nuclear Fuel and Reactor Metals) Moscow, Atomizdat, 1959. 670 p. (Series) Its: Trudy, vol. 3, 8,000 copies printed.

Ed. (Title page): A.A. Bochvar, Academician, A.P. Vinogradov, Academician, V.S. Yemel'yanov, Corresponding Member, USSR Academy of Sciences, and A.P. Zefirov, Doctor of Technical Sciences; Ed. (Inside book): V.V. Faramazyan and O.M. Pchelintsev; Tech. Ed.: E.I. Mazel'.

PURPOSE: This volume is intended for scientists, engineers, physicians, and biologists working in the production and peaceful application of atomic energy, for professors and ... students of schools of higher technical education where the subject is taught, and for people interested in atomic science and technology.

COVERAGE: This is volume 3 of a 5-volume set of reports on atomic energy presented by Soviet scientists at the Second International Conference on the Peaceful Uses of Atomic Energy, held in Geneva from September 1 to 13, 1958. Volume 3 consists of two parts. The first part, edited by A.I. Zubov, is devoted to geology, prospecting, concentration and processing of nuclear source material. The second part, edited by O.L. Ivanov, includes 27 reports on metallurgy, metallography, processing technology of nuclear fuels and reactor metals, and neutron irradiation effects on metals. The titles of the individual papers in most cases correspond word for word with those in the official English language edition on the Conference proceedings. See SOV/2061 for the titles of the other volumes of the set.

Tikhin, A.I., O.A. Tananayev, G.D. Glazkov, A.I. Kitushev, V.A. Polikarpov, and I.S. Pikulkina. Paragenetic Association of Hydrothermal Uranium Minerals in Uranium Deposits of the Soviet Union (Report No. 2201) ... 110

Germanov, A.I., S.G. Batulin, G.A. Volkov, A.K. Lisitsin, and V.S. Serebrennikov. Some Regularities of Uranium Distribution in Underground Waters (Report No. 2409) ... 134

New Data on Uranium Minerals in the USSR (Report No. 2060) ... 160

Germanov, A.I., M.V. Kvashnevskaya, A.I. Nikonov, N.M. Antsier, I.I. Zolotarev, S.A. Surov, and G.P. Polyova. Some Theoretical and Methodical Problems of Radiometric Prospecting and Survey (Report No. 2505) ... 199

Melaberidze Yu.E. The Gamma-ray Ionization Method for Classifying Anomalies in Radioactivity (Report No. 2245) ... 218

Korda, O.A., and M.L. Shirinshchev. Some Problems of Radiometric Uranium Ore Concentration (Report No. 2061) ... 227

Card 1/11

VOLKOV, G.A. (Moskva)

Choice of optimum magnitude of power reserve in an electric
power system. Izv. AN SSSR. Otd. tekh. nauk.Energ. i transp.
no.3:257-265 My-Je '63.   (MIRA 16:8)

MARKOVICH, I.M. (Moskva); VOLKOV, G.A. (Moskva)

Basic principles of the determination of optimum power
reserve in an electric power system. Izv. AN SSSR. Otd. tekh.
nauk. Energ. i transp. no.3:251-256 My-Je '63.

(MIRA 16:8)

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S/181/61/003/002/005/050
B102/B204

26.2246

AUTHOR: Volkov, G. A.

TITLE: The electron energy spectra in various points in an
            irradiated medium

PERIODICAL: Fizika tverdogo tela, v. 3, no. 2, 1961, 354-359

TEXT: It was the purpose of the present paper to solve the electron
transport equation by means of an expansion into a polynomial of the
required distribution function. When working with β-active isotopes it is
of importance to know the electron spectrum in the various point of the
irradiated medium. For the case of a plane source of given electron
energy distribution, which is located in an infinite, isotropic and
homogeneous medium, the following electron transport equation is obtained
considering the scattering of electrons as well as their energy losses by
ionization and atom excitation

$$-\frac{\partial J(\xi,\,\mu,\,\eta)}{\partial\eta} + \mu\,\frac{\partial J(\xi,\,\mu,\,\eta)}{\partial\xi} = \int d\Omega' Nr_0\sigma(\eta,\,\theta)[J(\xi,\,\mu',\,\eta) -$$

$$-J(\xi,\,\mu,\,\eta)] + \frac{\delta(\xi)f(\eta)}{4\pi}. \qquad (1)$$

Card 1/7

The electron energy spectra...

$J(\zeta, \mu, \eta)$ is the electron distribution function, N is the number of atomic scatterers per gram of substance, $\sigma(\eta, \theta)$ - the scattering cross section per solid angle unit, r_o - the longest path of an electron with maximum energy given in g/cm^2; ζ is the z-component of the place at which the electron is located in r_o-units, $(-1 \leq \zeta \leq 1)$; η is the real path covered by an electron from the source (xy-plane) up to the place on the z-axis (in r_o-units); $0 \leq \eta \leq 1$; $f(\eta)$ is the initial energy distribution of the electrons; $\mu = \cos \vartheta$, where ϑ is the angle between the z-axis and the direction of motion of the electron. As ansatz for the solution of (1),

the Legendre expansion $J(\zeta, \mu, \eta) = \frac{1}{4\pi} \sum_{l=0}^{\infty} (2l+1) P_l(\mu) J_l(\zeta, \eta)$ (2) is

obtained. The scattering cross section is assumed to be

$\sigma(\eta, \theta) = \frac{\Lambda(Z)}{\eta} (1+2\psi - \cos\theta)^{-2}$, where $\Lambda(Z)$ is a constant depending on Z, and ψ is the screening number

Card 2/7

20107

The electron energy spectra...

$$\psi = \frac{1}{4}\left[\frac{Z^{1/3}}{0.883 \cdot 137}\right]^2 \frac{1}{T(T+2)}\left[1.13 + 3.76\,(Z/137)^2 \frac{(T+1)^2}{T(T+2)}\right]; \; Z \text{ is the atomic}$$

number of the medium, T - the electron energy in mc^2-units. Thus,

$$\sigma_1(\eta) = \frac{A(Z)}{2\eta}\frac{\partial}{\partial(2\psi)}\left[Q_1(1+2\psi) - Q_0(1+2\psi)\right] = d_1/\eta, \text{ where } Q_1 \text{ is a Legendre}$$

function of the second kind. As $J_1(-\xi,\eta) = (-1)^1 J_1(\xi,\eta)$, it is possible

to represent $J_1(\xi,\eta)$ by even and odd components:

$$J_{2l}^{(2s)}(\xi,\ \eta) = w^{(2s)}(\xi)\sum_{n=0}^{\infty} J_{2l,n}(\eta)\,\mathfrak{M}_n(\xi), \tag{10}$$

$$J_{2l+1}^{(2s+1)}(\xi,\ \eta) = w^{(2s+1)}(\xi)\sum_{n=0}^{\infty} J_{2l+1,n}(\eta)\,\mathfrak{N}_n(\xi). \tag{11}$$

Here,

$$w^{(2s)}(\xi) = \frac{1}{4}\,\xi^{2s}\,|\xi|\,u(\xi), \tag{12}$$

$$w^{(2s+1)}(\xi) = \frac{1}{4}\,\xi^{2s+1}\,\sqrt{|\xi|}, \tag{13}$$

Card 3/7

20107

The electron energy spectra...

where $u(\xi) = \ln(1/\xi^2)$. The even functions $\mathfrak{M}_n(\xi)$ and $\mathfrak{N}_n(\xi)$ are given by

$$\mathfrak{M}_n(\xi) = \sum_{j=0}^{n} a_{nj}\left(\frac{u(\xi)}{2}\right)^j, \tag{14}$$

$$\mathfrak{N}_n(\xi) = \sum_{j=0}^{n} a_{nj}\left[\frac{u(\xi)}{4}\right]^j. \tag{15}$$

They are orthogonal and normalized with respect to the polynomials

$$\mathfrak{M}_n^{*(2n)}(\xi) = \frac{1}{\xi^{2a}|\xi|} \sum_{j=0}^{n} b_{nj}\left[\frac{u(\xi)}{2}\right]^{2j}, \tag{16}$$

$$\mathfrak{N}_n^{*(2n+1)}(\xi) = \frac{1}{\xi^{2a+1}|\xi|} \sum_{j=0}^{n} b_{nj}\left[\frac{u(\xi)}{4}\right]^{2j+1}. \tag{17}$$

The coefficients of these equations may be determined by solving the equations

$$\sum_{j=0}^{n} a_{nj}\Gamma(2N+j+2) = 0, \quad N = 0, 1, 2, \ldots (n-1), \tag{18}$$

$$\sum_{j=0}^{n} b_{nj}\Gamma(N+2j+2) = 0, \quad N = 0, 1, 2, \ldots (n-1). \tag{19}$$

Card 4/7

The electron energy spectra...

with an accuracy of up to one constant; the constants must be found from the normalization conditions. Thus, the following general solution results:

$$\mathfrak{M}_n(\xi) = \frac{(-1)^n}{2} \sum_{k=0}^{n} (-1)^k \binom{2n+1}{k} \sum_{j=0}^{n-k} \binom{n+j}{j} \frac{1}{2^j} \frac{\left[\frac{u(\xi)}{2}\right]^{n-k-j}}{\Gamma(n-k-j+1)}, \quad (20)$$

$$\mathfrak{M}_n^{*(2s)}(\xi) = \frac{1}{\xi^{2n}|\xi|} \sum_{k=0}^{n} (-1)^k \binom{n}{k} \frac{\left[\frac{u(\xi)}{2}\right]^{2k}}{\Gamma(2k+2)}. \quad (21)$$

$\binom{p}{q} = \Gamma(p+1)\Gamma^{-1}(q+1)\Gamma^{-1}(p-q+1)$. These equations are not well suited for practical computations. However, by the recurrence formulas

$$\mathfrak{M}_{n+2}(\xi) = \alpha_1 \mathfrak{M}_{n-1}(\xi) + \alpha_2 \mathfrak{M}_n(\xi) + \alpha_3 \mathfrak{M}_{n+1}(\xi), \quad (23)$$

$$\mathfrak{N}_{n+2}(\xi) = \alpha_1 \mathfrak{N}_{n-1}(\xi) + \alpha_2' \mathfrak{N}_n(\xi) + \alpha_3 \mathfrak{N}_{n+1}(\xi), \quad (24)$$

$$\alpha_1 = \frac{(2n+1)n}{2(n+1)(n+2)}, \quad (25a)$$

Card 5/7

$$\alpha_2 = -\frac{(6n^2+8n+3)\cdot 8 - u^2(\xi)}{16(n+1)(n+2)}, \quad (25b)$$

20107

The electron energy spectra...

S/181/61/003/002/005/050
B102/B204

$$\alpha_2' = -\frac{(6n^2 + 8n + 3) \cdot 32 - u^2(\xi)}{64(n+1)(n+2)},\qquad(25\text{в})$$

$$\alpha_3 = \frac{6n+7}{2(n+2)}.\qquad(25\text{г})$$

$\mathfrak{M}_n(\xi)$ and $\mathfrak{N}_n(\xi)$ may be calculated by means of computers. Up to $n \simeq 250$ such computations were carried out by means of the electronic computer "Ural"; some results are shown in Fig. 1. For the case of a Ca^{45}-surface source in organic glass, the initial energy distribution was approximated by $f(\eta) = 4\eta^{0.5}(1-\eta^{0.5})$, and the computation was restricted to the two first moments of the function $J_1(\xi,\eta)$. The energy spectra obtained for various ξ are shown in Fig. 2. As a unit, J_{max} for $\xi = 0.15$ was selected. The author thanks Candidate of Physical and Mathematical Sciences G.R.Rik for suggesting the subject and supervising work. There are 2 figures and 3 non-Soviet-bloc references.

ASSOCIATION: Agrofizicheskiy Institut Leningrad (Agrophysical Institute
             Leningrad)
SUBMITTED: April 2, 1960
Card 6/7

20107

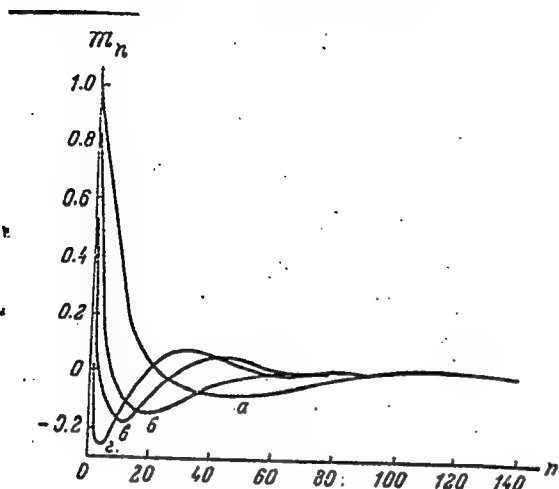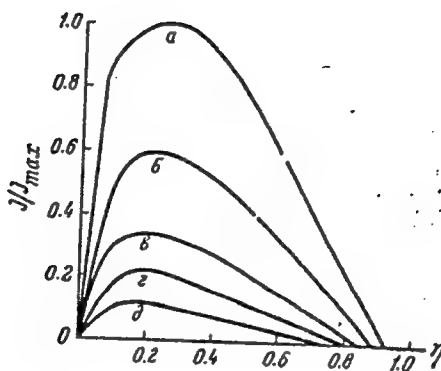The electron energy spectra...

Fig. 1

Fig. 2

Card 7/7

VOLKOV, G.A., inzh.

Determination of optimum power generation reserve in the design
of electric power systems. Elektrichestvo no.6:37-42 Je '63.
(MIRA 16:7)

1. Energeticheskiy institut imeni G.M. Krzhizhanovskogo.
(Electric power plants)

VOLKOV, G A. (Angren, Tashkentskoy obl.)

Power supply from the electric lighting network. Put' i put.khoz,
8 no.6:40 '64.   (MIRA 17:9)

SAKHNOVSKIY, K.V., doktor tekhn. nauk, prof., retsenzent; MOROZOV,
A.P., red.; VOLKOV, G.F., inzh., red.; REYZ, M.B., red.
izd-va; ROZOV, L.K., tekhn. red.

[Mesh-reinforced concrete elements in construction] Armo-
tsementnye konstruktsii v stroitel'stve; sbornik nauchnykh
soobshchenii. Leningrad, Gosstroiizdat, 1963. 177 p.
(MIRA 16:4)

1. Akademiya stroitel'stva i arkhitektury SSSR. Leningradskiy
filial. 2. Deystvitel'nyy chlen Akademii stroitel'stva i ar-
khitektury SSSR (for Sakhnovskiy, Morozov).
(Precast concrete construction)
(Roofing, Concrete)

VOLKOV, G.D., prof.

A new discipline. Veterinariia 41 no.10:102-103 O '64.

(MIRA 18:11)

1. Moskovskaya veterinarnaya akademiya.

MOROZOV, A.P., nauchnyy red.; VOLKOV, G.F., inzh., red.; PLAKID, M.A., kand. tekhn. nauk, nauchnyy red. [deceased]; NIKOLAYEVA, N.M., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Mesh-reinforced koncrete and mesh-reinforced concrete structures] Armotsement i armotsementnye konstruktsii; materialy nauchnogo soveshchaniia. Moskva, Gosstroi-izdat, 1962. 266 p. (MIRA 16:8)

1. Nauchnoye soveshchaniye po armotsementu i armotsement-nym konstruktsiyam, Leningrad, 1961. 2. Leningradskiy filial Akademii stroitel'stva i arkhitektury SSSR (for Morozov, Volkov).

(Reinforced concrete construction)

S/183/60/000/02/03/...
B004/B005

AUTHOR: Volkov, I. I., Director

TITLE: Report

PERIODICAL: Khimicheskiye volokna, 1960, No. 2, pp. 6 - 9

TEXT: This report was delivered at the Branch Conference of the Synthetic Fiber
Industry in Klin, December 16-18, 1959. The Klinskiy kombinat (Klin Kombinat)
produces viscose fiber, cellophane foil, caprone rayon, staple fiber, bristles
and cord. The lecturer gives a survey of the measures which have led to an im-
provement in quality of the production as compared to 1950. First-quality produc-
tion amounts to 63.5 - 68.2%. In spite of this fact, consumers are dissatisfied.
The shortcomings of production are caused by bad raw materials. The Priozerskiy
tsellyuloznyy kombinat (Priozersk Cellulose Kombinat) supplies cellulose with
low content of α-cellulose and a high ash content. The caustic soda has a high
content of impurities. Dyes are delivered with a particle size of 60-80 μ. The
Rubezhanskiy zavod (Rubezhnoye Works) delivers finely disperse anthraquinone-
blue which, however, contains iron. The TiO_2 of the Yaroslavskiy zavod (Yaroslavl
Works) contains no particles smaller than 0.3 μ. For caprolactam, the GOST-785...

Card 1/3

Report   S/183/60/000/02/03/025
                                          B004/B005

standard is much too low. In spite of this fact, 24.6 - 39% of the caprolactam
delivered was below this standard. Good oiling agents are missing. Nine of 13
deliveries of BV preparation by the khimicheskiy zavod im. Baturina (Chemical
Factory imeni Baturin) in Ivanovo were below standard. The equipment of the
factory is antiquated. The spinning pumps delivered by the Kamenskiy mashino-
stroitel'nyy zavod (Kamenka Machine Construction Works) have a service life of
1.5 - 4 months. The bobbins made of Getinaks by the zavod "Elektroizolit"
("Elektroizolit" Works), as well as the glass oiling discs of the zavod "Krasny
May" ("Red May" Works) at Vyshniy Volochek, last 1 month only. The TsNIIMashde
(Central Scientific Research Institute of Auxiliary Articles and Span Parts for
the Textile Industry) will have to find new materials for oiling discs and bob-
bins. The caprone fiber production could not be extended in 1959 due to the shor
age of structural iron. The experimental plant for caprone fiber has to work f
the current production. The following measures are suggested to improve the
quality: The GIPROIV (State Institute for the Design and Planning of Synthetic
Fiber Industry Establishments) is to work out a modernization scheme for the
factory. The GOST standard on cellulose and caprolactam is to be improved. T
Rubezhnoye Works and the Tambovskiy zavod (Tambov Works) are to deliver better
dyes. The TsNIIBum (Central Scientific Research Institute of the Pulp and Pape

Card 2/3

Raport

S/183/60/000/02/03/0??
B004/B005

Industry), the TsNIIMashdetal', and the shpul'no-katushechnaya fabrika im. Dzerzhinskogo (Spool and Bobbin Factory imeni Dzerzhinskiy) are to choose better paper- and cardboard sorts. The Ministerstvo bumazhnoy promyshlennosti RSFSR (Ministry of the Paper Industry of the RSFSR) will have to fix more rigorous standards on spool cardboard. Experimental workshops and laboratories are to be established.

ASSOCIATION: Klinskiy kombinat (Klin Kombinat)

Card 3/3

3(8)·

AUTHORS: Germanov, A. I., Volkov, G. A.;   SOV/7-59-3-7/13
            Lisitsin, A. K., Serebrennikov, V. S.

TITLE: Results from Investigating the Oxidation-reduction Potential
            of Subterranean Waters (Opyt izucheniya okislitel'no-
            vosstanovitel'nogo potentsiala podzemnykh vod)

PERIODICAL: Geokhimiya, 1959, Nr 3, pp 259-265 (USSR)

ABSTRACT: During the period from 1951 to 1957 the oxidation-reduction
            potential was determined more than 300 times of subterranean
            waters from (Soviet) Central Asia, Kazakhstan and the Caucasus.
            Determination was carried out by means of LP-4-, LP-5-, and
            P-6-type potentiometers of the "MOSKIP" plant. Samples were
            in most cases taken from bore-holes and more rarely from
            springs, and only for purposes of comparison from water-courses
            on the surface. Certain precautionary measures were taken when
            taking samples (Fig 1) in order to eliminate the influence
            exercised by the oxygen of the air. Besides the oxidation-
            reduction potential, also pH and temperature were measured,
            a chemical analysis was carried out, and the gas content was
            investigated (Table). The oxidation-reduction potential is

Card 1/2   between +550 and -480 millivolt referred to the normal hydrogen

An Attempt at Investigating the Oxidation-reduction   SOV/7-59-3-7/13
Potential of Subterranean Waters

electrode; in oxygen-containing waters it is + 300, in
hydrocarbonaceous waters it is between -30 and -480 mv.   The
highest value of + 550 mv was found in water containing
oxygen of pH 2.   Water containing oxygen is found in depths
of up to about 1000 m; the biochemical oxidation of organic
substance may be found in even greater depths.   There are 3
figures and 1 table.

ASSOCIATION: Institut geologii rudnykh mestorozhdeniy, petrografii,
mineralogii i geokhimii AN SSSR, Moskva (Institute for the
Geology of Ore Deposits, Petrography, Mineralogy, and
Geochemistry, AS USSR Moscow)

SUBMITTED: July 18, 1958

Card 2/2

VOLKOV, G. D., Cand. of vet. sci.
Moscow Veterinary Acad.
     "Pentothal narcosis."
SO: Veterinariia 27(11), 1950, p. 42

VOLKOV, G. D. *Lecturer, moscow Vet-acad*

Pentothal

Experiment of using mass pentothal and thiopental narcosis for the castration of young pigs, Veterinariya 29, No. 7, 1952

VOLKOV, G. D.

"Pentothal and Thiopental Narcosis for Agricultural Animals and Wild Fur-Bearing Animals." Dr Vet Sci, Moscow Veterinary Academy, Min Higher Education USSR, Moscow, 1954. (KL, No 8, Feb 55)

SO: Sum. No. 631, 26 Aug 55 - Survey of Scientific and Technical Dissertations Defended at USSR Higher Educational Institutions (14)

L 3895-66   EWT(m)

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BOOK EXPLOITATION

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577.391 (075.8)

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Volkov, Georgiy Dmitriyevich; Lipin, Vasiliy Aleksandrovich; Cherkasov, Dmitriy Pavlovich

Radiobiology (Radiobiologiya), Moscow, Izd-vo "Kolos", 1964. 231 p. illus., 7,000 copies printed. Series note: Uchebniki i uchebnyye posobiya dlya vysshikh sel'skokhozyaystvennykh uchebnykh zavedeniy.

TOPIC TAGS: radiobiology, radiology, nuclear radiation, ionizing radiation, radiation biologic effect, radiation plant effect, horticulture, animal husbandry, radiation sickness, radioactive contamination, nuclear protective equipment, nuclear safety, nuclear shielding

PURPOSE AND COVERAGE: This textbook of radiobiology presents the principles of general radiology, elements of the physics of nuclear radiation, dosimetry, and radiometry of ionizing radiation. It gives an introduction to the use of ionizing radiation in cattle breeding and agriculture as well as sanitary radiometric control of objects in veterinary supervision. Also, the textbook gives an account of basic radiation safety and the organization of work with radioactive materials. This book is intended for veterinary institutes and departments.

Card 1/2

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TABLE OF CONTENTS (abridged):

SUB CODE: LS, NP   SUBMITTED: 20May64

NO REF SOV: 000   OTHER: 000
Card 2/2

VOLKOV, Georgiy Dmitriyevich.

Academic degree of Doctor of Veterinary Sciences, based on his
defense, 4 February 1955 in the Council of Moscow Veterinary
Academy, of his dissertation entitled: "Pentotalic and Tiopentalic
Narcosis of Agricultural Animals and Furbearing Animals."

Academic degree and/or title: Doctor of Sciences

SO: Decisions of VAK, List no. 12, 28 May 55, Byulleten' MVO SSSR,
     No. 15, Aug 56, Moscow, pp. 5-24, Uncl.   JPRS/NY-537

VOLKOV, Georgiy Dmitriyevich; LITIN, Vasiliy Aleksandrovich; CHERKASOV, Dmitriy Pavlovich; ZELEPUKIN, V.S., red.

[Radiobiology] Radiobiologiia. Moskva, Kolos, 1964.
231 p.   (MIRA 17:9)

MOROZOV, A.P., nauchnyy red.; VOLKOV, G.F., inzh., nauchnyy red.;
    PLAKID, M.A., kand. tekhn. nauk, nauchnyy red. [deceased];
    NIKOLAYEVA, N.M., red.izd-va; KOMAROVSKAYA, L.A., tekhn. red.

[Materials of the Scientific Conference on Mesh-Reinforced
Concrete and Mesh-Reinforced Concrete Elements]Materialy Nauch-
nogo soveshchaniia po armotsementu i armotsementnym konstruktsiiam,
Leningrad, 1961. Moskva, Gosstroiizdat, 1962. 266 p.
                                              (MIRA 16:1)

1. Nauchnoye soveshchaniye po armotsementu i armotsementnym kon-
struktsiyam, Leningrad, 1961. 2. Deystvitel'nyy chlen Akademii
stroitel'stva i arkhitektury SSSR (for Morozov). 3. Leningradskiy
filial Akademii stroitel'stva i arkhitektury SSSR (for Morozov,
Volkov).
            (Reinforced concrete—Congresses)

VOLKOV, G.F., inzh.; LANTSOV, V.A., kand.tekhn.nauk; SHARYY, Yu.V.,
kand.tekhn.nauk; RAYLYAN, V.F., prof., red.; ROTENBERG,
A.S., red.izd-va; PUL'KINA, Ye.A., tekhn.red.

[Comprehensive building up of city blocks with large
buildings; practices in Leningrad] Kompleksnaia zastroika
kvartalov krupnoelementnymi zdaniiami; iz opyta Leningrada.
Leningrad, Gos.izd-vo lit-ry po stroit., arkhit. i stroit.
materialam, 1959. 124 p.   (MIRA 12:6)
                  (Leningrad--Building)

VOLKOV, G.G., inzhener-mayor, kand.tekhn.nauk

       Rocket plane. Vest. Vozd. Fl. no.5:86-89 My '61.   (MIRA 14:8)
                 (Rocket planes)

VOLKOV, G. I.   c/1963   1964
                                        DECEASED

AGRICULTURAL MACHINERY

VOLKOV, G.I.

Ca

Separating 1,4,8- and 2,4,8-naphthylaminedisulfonic acids. G. I. Volkov. Russ. 33,163, Nov. 30, 1933. The Na salts of these acids are recrystallized from water.

CA
VOLKOV, G.I.

Determination of 3-amino- and 4-amino-1,5-naphthalenedisulfonic acids in presence of each other. G. I. Volkov and K. V. Gurvich. Russ. 35,808, Apr. 30, 1971. The total amt. of the 2 acids is detd. by means of diazotization. Then the 4-amino compd. is detd. by coupling with diazotized 3-amino-1,5-naphthalenedisulfonic acid in AcOH soln. The amt. of the 3-amino isomer in the original mixt. is detd. by difference.

VOLKOV, G. L.

Electrolytic manufacture of Cl and alkali. G. I. Volkov. Russ. 59,081, February 28, 1941. The regenerated Hg is returned to the electrolyzer from the decomposer by means of H sepd. in the process of decompn. of the amalgam.

VOLKOV, G.I.

4

Electrolytic production of chlorine and alkali. G. I. Volkov. U.S.S.R. 67,024, Feb. 28, 1917. Improvements in the design of app. are given. Addn. to U.S.S.R. 59,081 (C.A. 39, 874*). M. Hosch

VOLKOV, G. I.

Metallurgical Abst.
Vol. 21 May 1954
Electrometallurgy and Electrochemistry

Rate of Decomposition of Sodium Amalgam in Alkaline Solutions. G. I. Volkov and Z. L. Klitaa (*Zhur. Priklad. Khim.*, 1952, 25, (2), 154-158 (in Russian); *J. Appl. Chem. U.S.S.R.*, 1952, 25, (2), 163-167, 253 (in English).—The rate of decompn. was determined by measuring the current flowing in a short-circuited graphite/amalgam cell, by a compensation method. The alkali soln. was prepared by diluting 50% NaOH obtained by electrolysis of salt with a Hg cathode. Values of c.d. for a 0.1% Na amalgam in NaOH soln. (44-750 g.) at 30°-90° C. and for 0.1% Na amalgam in soln. contg. from 40% (at 30° C.) to 91.6% NaOH (at 300° C.) are tabulated. Difficulty was experienced in obtaining reproducible results, because of the sensitivity of the graphite electrode to contamination. The results are discussed in terms of the operating conditions of amalgam-decomposing cells.—G. V. E. T.

VOLKOV, G. I.

Chemical Abst.
Vol. 48 No. 9
May 10, 1954
General and Physical Chemistry

Velocity of decomposition of sodium amalgam in alkaline
solution. G. I. Volkov and Z. L. Klitsa. *J. Appl. Chem.*
U.S.S.R. 25, 163-7(1952)(Engl. translation).—See *C.A.* 47,
4701b.   H. L. H.

VOLKOV, G. I.

Chem.

Chem Abs v48
1-25-54
general & Physical
Chemistry

3

(1)

—The rate of decomposition of sodium amalgam in alkaline solutions. G. I. Volkov. *Zhur. Fis. Khim.* **27**, 194-6 (1953); cf. C.A. 47, 7010.—Amalgam (contg. 0.055% Na) was placed in a satd. NaCl soln. for 11 days, and the spots that gassed strongly and all visible surface layers were removed daily. This treatment lowered the rate of soln.; the lowest rate was 1.4×10^{-4} cc. H_2/sq. cm. hr. (at pH 12). It corresponds to H overvoltage of 1.8 v. at c.d. of 1 amp./ sq. cm. Thus, this ove voltage is greater than was hitherto believed. The overvoltage should depend on the metal in the amalgam.   J. J. Bikerman

Volkov, G. I.

2

Effect of compounds of different elements on the rate of decomposition of sodium amalgams in brine.   G. I. Volkov. *J. Appl. Chem. U.S.S.R.* 27, 643–5(1954)(Engl. translation).—See *C.A.* 49, 38i.   B. M. R.

VOLKOV, G.I.

Rate of decomposition of sodium amalgams in alkaline solutions. G. I. Volkov. _Zhur. Priklad. Khim._ 27, 581–4 (1954). cf. _ibid._ 285–9. — The effect of the following compds. on the rate was investigated (the figures in parentheses are the concns. (mg.), and the vol. (ml.) of H_2 generated in 30 min., resp.): $CuSO_4$ (100, 0.4), nitrates of: Ag (10, 0.15), Be (1000, 0.2), Th (10, 0.3), U (1.0, 0.2), chlorides of: Mg (10, 0.1), Ca (10, 0.1), Sr (100, 0.1), Ta (10, 0.2), Ba (10, 0.1), Zn (100, 0.1), Cd (10, 0.1), Y (10, 0.2), La (10, 0.6), Ce (1000, 0.3), Pr (1000, 0.4), Nd (1000, 0.3), Sm (1000, 0.4), Eu (1000, 0.2), Er (1000, 0.3), Tl (10, 0.15), Zr (10, 0.15), Sn (1000, 1.3), Pb (1.0, 0.05), Bi (10, 0.1), Mn (1.0, 0.05), Fe (1.0, 0.3), Co (10, 0.1), Ni (1.0, 0.4), Ru (0.1, 0.2), Rh (0.1, 0.2), Pd (0.01, 0.1); NH_4 (, 0.7), Na_2O_2 (0.01, 4.5), Na arsenite (10, 0.1), Na antimonate (100, 0.6), Na_2CrO_4 (0.1, 2.5), Na_2MoO_4 (0.1, 1.2), Na_2WO_4 (10, 0.1), Na_2FeO_4 (10, 0.15), K_2OsCl_6 (0.1, 0.2); K_2PtCl_6 (0.01, 2.2); alkali soln. of Ge (0.01, 0.1, 0.2); tantalic acid fused with $NaHCO_3$ (1000, 0.1); NH_4 Ga alum (100, 0.1); borax (1000, 0.3); $AlCl_3$ (1.0, 0.2), K perrhenate (0.1, 0.15).　　　　　I. Bencowitz

VOLKOV, G.I.

VOLKOV, G. I.

Decomposition of alkali metal amalgams. G. I. Volkov, E. A. Kalashnikov, A. L. Miller, A. G. Simon, and P. G. Khain. U.S.S.R. 106,252. ... The app. for decompn. of the amalgams ... ... of steps over which the amalgam flows ...

AUTHORS: Yakimenko, L. M., Volkov, G. I.   SOV/64-58-5-15/21

TITLE: News in the Production of Chlorine and Caustic Potash
              According to the Mercury Method (Novoye v proizvodstve khlora
              i kaustika po rtutnomu metodu)

PERIODICAL: Khimicheskaya promyshlennost', 1958, Nr 5, pp.315 - 320 (USSR)

ABSTRACT: This paper is based on the data obtained from the Review
              of H.A.Sommers, Chem.Eng.Progr., 53, Nr 9, 409 (1957). Its
              production of a purer and cheaper product is given as the
              reason for the preferred development of the mercury method
              as opposed to the diaphragm electrolysis. The authors give
              a table of the electric indices of some tank types as well as
              a number of figures which demonstrate the type of construction
              Among the types mentioned in the tables the tanks according to
              Matiyeson, Sol've, Ude, of the BASF and the De-Nora are de-
              scribed. Various individual data as well as advantages and
              disadvantages of the tank types are mentioned and explained I
              is found that the most effective increase of the amperage load
              of the tank is obtained by an increase of the current density
Card 1/2   In plants with high output or low-voltage rectifiers it is

News in the Production of Chlorine and Caustic Potash   SOV/64 58 5 15/21
According to the Mercury Method

        useful to carry out the amperage load of the tank also at
the expense of an increase in dimensions. The vertical scrubber
analyzers of amulgam have no advantages over the horizontal
ones. The tank constructions without passage are especially
worth mentioning. Arrangements with separate shunting switches
at the tanks prove to be unnecessary. The vertical tanks will
have a special advantage over the horizontal tanks until it
becomes possible for the approach of the electrodes according
to the degree of consumption of the anodes. There are 19
figures and 4 tables.

1. Chlorine—Production   2. Potassium carbonates—Production.
3. Electrolytes—Performance   4. Mercury—Applications

Card 2/2

AUTHORS: Volkov, G. I., Grinevich, V. I.   SOV/78-3-8-40/48

TITLE: The Solubility of Lithium Carbonate in Lithium Chloride So-
                 lutions (Rastvorimost' uglekislogo litiya v rastvorakh
                 khloristogo litiya)

ABSTRACT: The solubility of Li_2CO_3 was determined in 2, 5, 10, 20, and
                 30 per cent lithium chloride solutions. The data of the sol-
                 ubility of lithium carbonate in water at 20° centigrade co-
                 incide with the data of Bewad. According to Bewad the solu-
                 bility of lithium carbonate in water at 20° centigrade amounts to
                 3,1 g/l, at 50° centigrade to 11,7 g/l, and at 75° centigrade to
                 8,6 g/l. The solubility of lithium carbonate was also deter-
                 mined in solutions of lithium chloride at 20, 40, 60, and 80°
                 centigrade. At 20° centigrade the solubility of 2 per cent
                 lithium chloride solution amounts to 3,80 g/l and at 80° centi-
                 grade to 2,10 g/l, in 5 per cent lithium chloride solution at
                 20° centigrade to 1,36 g/l and at 80° centigrade to 0,95 g/l, in
                 10 per cent solution at 20° centigrade to 0,37 g/l and at 80°

Card 1/2

SOV/78-3-3-40/48

The Solubility of Lithium Carbonate in Lithium Chloride Solutions

centigrade to 0,24 g/1, in 20 per cent solution at 20°centi-
grade to 0,06 g/1 and at 80°centigrade to 0,04 g/1, in 30 per
cent solution at 20°centigrade to 0,03 g/1 and at 80°centi-
grade to 0,03 g/1. There are 1 figure, 2 tables, and 1 ref-
erence,   which is Soviet.

SUBMITTED: January 4, 1958

Card 2/2

VOLKOV, G.I.; KUS'KINA, E.I.

Electrolysis experiment with cathode of mercury streaming down
a metal surface. Zhur.prikl.khim. 31 no.11:1755-1757 N '58.

(MIRA 12:2)

(Electrodes, Mercury)

VOLKOV, G. I.

5(4)

PHASE I BOOK EXPLOITATION SOV/2216

Soveshchaniye po elektrokhimii. 4th, Moscow, 1956.

Trudy...; [sbornik] (Transactions of the Fourth Conference on Electrochemistry; Collection of Articles) Moscow, Izd-vo AN SSSR, 1959. 868 p. Errata slip inserted. 2,500 copies printed.

Sponsoring Agency: Akademiya nauk SSSR. Otdeleniye khimicheskikh nauk.

Editorial Board: A.N. Frumkin (Resp. Ed.) Academician, O.A. Yesin, Professor; S.I. Zhdanov (Resp. Secretary), B.N. Kabanov, Professor, S.I. Zhdanov (Resp. Secretary); B.N. Kabanov, Professor, Ya. M. Kolotyrkin, Doctor of Chemical Sciences; V.V. Losev, P.D. Lukov'yev, Professor; Z.A. Solov'yeva; V.V. Stender, Professor; and G.M. Florianovich; Ed. of Publishing House: N.G. Yegorov; Tech. Ed.: T.A. Prusakova.

PURPOSE: This book is intended for chemical and electrical engineers, physicists, metallurgists and researchers interested in various aspects of electrochemistry.

COVERAGE: The book contains 127 of the 138 reports presented at the Fourth Conference on Electrochemistry sponsored by the Department of Physical Chemistry, Academy of Sciences, USSR. The collection pertains to different branches of electrochemical kinetics, double layer theories and galvanic processes in metal electrodeposition and industrial electrolysis. Abridged discussions are given at the end of each division. The majority of reports not included here have been published in periodical literature. No personalities are mentioned. References are given at the end of most of the articles.

Kaganuk, O.S., and V.V. Stender (Dnepropetrovsk Institute of Chemical Technology imeni F.E. Dzerzhinskiy). Polarization of Graphite Electrodes During the Anodic Separation of Chlorine   823

Buranov, N. Ye., and O.A. Tsyganov (Institute of Chemistry, Academy of Sciences, UzSSR). Hydrogen Overvoltage at Electrodes With Homogeneous Surface   827

Bakov, A.A., K.I. Magara, and E.V. Kasatkin (Physicochemical Institute imeni L. Ya. Karpov). Mechanism of the Simultaneous Electrochemical Formation of Persulfuric Acid, Ozone and Oxygen at a Platinum Anode in Sulfuric Acid Solutions   834

Volkov, G.I., Z.L. Kitaa, Ye. K. Susorova and N. V. Cherina. Influence of Surface-Active Substances on the Rate of Decomposition of Sodium Amalgams   841

Il'in, G. G., and V.I. Skripchenko (Novocherkassk Polytechnic

Card 33/34

Transactions of the Fourth Conference (Cont.) SOV/2216

Institute imeni S. Ordzhonikidze). Influence of the Nature of an Electrolytic Cation on the Anode Process During the Electrolysis of Alkaline and Alkaline-Earth-Metal Chloride Solutions   845

Voronin, N.N. (Deceased), B. G. Prikhodchenko, A.A. Yedigaryan, O. V. Izbekova, I. G. Pavlenko, Ye. Kh. Ignatenko, and I.V. Tracnuk (Kiyev Polytechnic Institute). Electrolytic Reduction of Oxygen at Porous Cathodes   849

Discussion [N. A. Fedorov, R.I. Kaganovich, Ye. M. Kuchinskiy, G.N. Kokhanov, and contributing authors]   856

AVAILABLE: Library of Congress

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5(1)
AUTHORS: Volkov, G. I., Mulin, Ye. V.

TITLE: On the Thickness of Mercury Layers in Baths With a Mercury
             Cathode

PERIODICAL: Khimicheskaya promyshlennost', 1959, Nr 5, pp 408-410 (USSR)

ABSTRACT: Extremely thin layers of Hg may be obtained in electrolyzers
             with wetting Hg-cathode, because thickness is not limited by
             surface tension. The bottom of the baths, which are in horizon-
             tal position, usually exhibits an inclination of 1.5 mm/m and the
             Hg-layers are 3 - 3.5 mm thick (for the addition rate of
             0.1 l/min per cm width of the bath). The rise of the angle of
             inclination causes a reduction of the layer thickness and, in
             consequence, of the necessary amount of Hg. The dependence of
             the layer thickness on the angle of inclination of the bottom
             plane as well as on the flow velocity of Hg (properly speaking
             of a weak Na-amalgam) was investigated. The thickness of the
             amalgam layer was measured by means of an indicator-micrometer
             with 0.01 mm graduation of scale. Measurements were made in such
             way that an alternating current circuit closed by the contact of
Card 1/2   the indicator-micrometer pin with the amalgam; this was recorded

SOV/64-59-5-11/26

On the Thickness of Mercury Layers in Baths With a Mercury Cathode

by a voltmeter. The method of measurement was checked in a steel
beaker by measuring the increase of the Hg-layer thickness, oc-
curring with the addition of weighed Hg amounts, in fixed posi-
tion of the indicator-micrometer. Subject of measurement was a
steel plate (30 mm wide, 300 mm long, with a raised edge lateral-
ly), its angle of inclination was varied by a hinged mounting
and was measured by means of a goniometer. The amount of the
amalgam, flowing over the steel plate per unit of time, was
determined by means of a flowmeter as well as by weighing the
amount of amalgam flowing off from the steel plate. The applied
steel plates consisted of already used bottoms of electrolyzers
as well as of highly polished steel plates. As may be seen from
the diagrams obtained (Figs 1,2) the thickness of layer depends
on the angle of inclination and on the amount of amalgam flowing
by. The diagrams plotted in the coordinates thickness of layer -
angle of inclination (Figs 3,4) show, that already with a small
increase of the angle of inclination the thickness of layer and
the necessary Hg-amount decreases. There are 4 figures.

Card 2/2

5(4)   SOV/69-21-4-7/22

AUTHOR: Volkov, G.I. and Gusakova, D.Ya. (Moscow)

TITLE: Concerning Amalgam Foams

PERIODICAL: Kolloidnyy zhurnal, 1959, Vol XXI, Nr 4. pp 413-414 (USSR)

ABSTRACT:
The authors report on experiments made to ascertain the cause
of the foaming of sodium amalgam taking place at times on its
contact with aqueous solutions. The effect of the addition of
iron, copper, zinc, cobalt, barium, manganese, tin, vanadium,
tungsten, molybdenum, cadmium, palladium, titanium, arsenic,
tellurium, germanium, antimony, lead, nickel and chromium to
the solution was investigated. Amalgam foam was found to form
spontaneously on contact of sodium amalgam with an aqueous
solution containing 0.2 mg/l chromium salt as referred to the
metal. There are 4 references, 2 of which are Soviet and 2
German.

SUBMITTED: 4 November, 1957
Card 1/1

VOLKOV, G.I.; GRINEVICH, V.A.

       Speeding up the decomposition of sodium amalgam. Khim.prom. no.1:
       58-59 Ja-F '60.   (MIRA 13:7)
            (Amalgam)

VOLKOV, G.I.; IZOSENKOV, R.I.

Effect of calcium ions on the operation of a chlorine electrolyzer with a mercury cathode. Khim. prom. no. 7:562-564 O-N '60.
(MIRA 13:12)

(Electrolysis)   (Calcium)

CHEREMISINA, N.V.; VOLKOV, G.I.; KHOMYAKOV, V.G.

Decomposition of sodium amalgam in a short-circuited galvanic
element. Zhur.prikl.khim. 34 no.10:2268-2275 O '61. (MIRA 14:11)
                (Amalgams) (Electrochemistry)

KORNEYEV, N. N.; POPOV, A. F.; ZHIGACH, A. F.; VOLKOV, G. I.

Synthesis of diethyl aluminum chloride via triethyl aluminum
sesquichloride. Khim. prom. no.3:178-180 Mr '63,
(MIRA 16:4)

(Aluminum compounds)   (Aluminum chloride)